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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/530,598	11/12/2005	Moti Harel	E1975-00020	6923

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DUANE MORRIS, LLP
IP DEPARTMENT
30 SOUTH 17TH STREET
PHILADELPHIA, PA 19103-4196

EXAMINER

HUANG, GIGI GEORGIANA

ART UNIT	PAPER NUMBER
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1612

MAIL DATE	DELIVERY MODE
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02/05/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/530,598	Applicant(s) HAREL ET AL.	
	Examiner GiGi Huang	Art Unit 1612	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 December 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-64 is/are pending in the application.
- 4a) Of the above claim(s) 1-59 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 60-64 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>2/17/2006, 8/7/2006</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

1. Applicant's election without traverse of Group III in the reply filed on December 14, 2007 is acknowledged. The election of species requirement is withdrawn for the carotenoid and the phospholipid for the elected claims present for examination.

Status of Application

2. Applicant has elected Group III in response to restriction requirement for the examination.

Due to restriction, based on election of Group III, claims 1-59 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

Claims 60-64 are present for examination at this time.

Information Disclosure Statement

3. The information disclosure statement filed February 17, 2006 and August 7, 2006 fails to comply with the provisions of 37 CFR 1.97, 1.98 and MPEP § 609 because there is no translation present for the non-patent literature by Cannizares-Villanueva et al. and the EP 0410236. The references have been placed in the application file, but the information referred to therein has not been considered as to the merits. Applicant is advised that the date of any re-submission of any item of information contained in this information disclosure statement or the submission of any missing element(s) will be the date of submission for purposes of determining compliance with the requirements based

on the time of filing the statement, including all certification requirements for statements under 37 CFR 1.97(e). See MPEP § 609.05(a).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 60-61, 63-64 are rejected under 35 U.S.C. 103(a) as being unpatentable over Subimoto (JP 06-070698).

It is noted that the references made are to the machine translation included.

Subimoto teaches a method of making a feed additive for fish for improving meat quality and color. Subimoto teaches formulating the feed additive by blending 100g of phospholipid with 0.1-10g of carotenoid. The additive is then added to the feed where the composition comprises at least 2g phospholipid (at least 2% of the feed) and at least 3mg carotenoid (at least .03% of carotenoid) per 100g of feed (Abstract, Claims 1-4, Description: Paragraphs 1-3, 5-12, 14-16, 20-25, Technical field, Technical Problem, Means (all paragraphs), Example (all paragraphs)).

The carotenoids taught for use are astaxanthin, canthaxanthin, zeaxanthin, and beta-carotene, among others. Subimoto also teaches a carotenoid complex (which would include more than one carotenoid) can be used. The phospholipid predominately

used is lecithin and preferably in oil form. If a powder form was used, oil such as vegetable, soybean, corn, olive, and others would be used to dilute the powder to form an oil to be added in the feed.

The carotenoid and phospholipid are mixed, then a binder and vegetable feed are added, and the feed is fabricated into pellet form to be used as feed. Subimoto states that the amounts can change with concentration and fish stocks.

Subimoto does not expressly teach the lowest limitation of a carotenoid to be at least 1% and the phospholipid to be at least 5%.

It would have been obvious to one of ordinary skill in the art at the time the claimed invention was made to adjust the amounts of the carotenoid and phospholipid, as suggested by Subimoto, and produce the instant invention.

While Subimoto does not expressly state the range of a carotenoid to be at least 1% and the phospholipid to be at least 5%, it is encompassed by the ranges taught by Subimoto. Subimoto teaches that the composition comprises at least 2g phospholipid (at least 2% of the feed) and at least 3mg carotenoid (at least .03% of carotenoid) per 100g of feed. It would have been obvious to one of skill in the art to adjust the amount of carotenoid dependent on the animal to be feed or the components of the feed and particularly, to increase the amount of carotenoid to improve the color in the animal meat (e.g. salmon) as it is visually more appealing to consumers. The amount of phospholipid would increase proportionally as the additive requires blending 100g of phospholipid with 0.1-10g of carotenoid.

One of ordinary skill in the art would have been motivated to do this because greater color in the animal meat such as salmon is visually more appealing to consumers and would produce more sales. The improved and greater concentration of color would be easily accomplished by the increase of the carotenoids in the feed.

A reference is good not only for what it teaches by direct anticipation but also for what one of ordinary skill in the art might reasonably infer from the teachings. From the teachings of the references, it is apparent that one of ordinary skill in the art would have had a reasonable expectation of success in producing the claimed invention. Therefore, the invention as a whole was *prima facie* obvious to one of ordinary skill in the art at the time the invention was made, as evidenced by the references, especially in the absence of evidence to the contrary.

6. Claims 62 is rejected under 35 U.S.C. 103(a) as being unpatentable over Subimoto as applied to claims 60-61, 63-64 above, and in view of Place et al. (U.S. Pat. No. 6261590).

The teachings of Subimoto are addressed above.

Subimoto does not expressly teach coating the pellet with the mixture.

Place et al. teaches that drugs, vitamins, carotenoids, and/or pigments are usually added to animal feed (soap solution) before the spray drying process which would form the granules (e.g. powders, pellets, etc.). Place also teaches that the drugs, vitamins, carotenoids, and/or pigments could also be added to the feed (soap powder)

after the drying step. The carotenoids and pigments included beta-carotene, cantaxanthin, astaxanthin, astaxanthin esters, zeaxanthin, among others.

It would have been obvious to one of ordinary skill in the art at the time the claimed invention was made to coat the pellets with the carotenoid mixture, as suggested by Place et al., and produce the instant invention.

One of ordinary skill in the art would have been motivated to do this because it is desirable for manufacturers to have several choices to modify and distribute the carotenoid/phospholipid additive depending on the degree of absorption and method of delivery used to produce the final product. If the additive is incorporated in the feed, the absorption would be delayed or time release dependent the components of the feed. If the additive was on the outer coat of the feed, then it would be immediate release in the digestive process. One would be motivated to use either method depending on the desired outcome. Additionally, many of the carotenoids taught in Place were those taught in Subimoto showing compatibility and a reasonable expectation of success.

A reference is good not only for what it teaches by direct anticipation but also for what one of ordinary skill in the art might reasonably infer from the teachings. From the teachings of the references, it is apparent that one of ordinary skill in the art would have had a reasonable expectation of success in producing the claimed invention. Therefore, the invention as a whole was *prima facie* obvious to one of ordinary skill in the art at the time the invention was made, as evidenced by the references, especially in the absence of evidence to the contrary.

Conclusion

7. Claims 60-64 are rejected.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to GiGi Huang whose telephone number is (571) 272-9073. The examiner can normally be reached on Monday-Thursday 8:30AM-6:00PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Fredrick Krass can be reached on 571-272-0580. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

GH

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Zohreh Fay (Primary Examiner)

A handwritten signature in black ink, appearing to read "Zohreh Fay". The signature is written in a cursive, flowing style with a large loop at the end of the last name.